

the same onion-like structure of the laminæ, particularly in the cat, dog, ox, and sheep, is observed. In man the vitreous humour is found to be chiefly composed of slices, the arches turned outward, and the angles converging towards the axis of the eye, somewhat like the segments of an orange, and this peculiarity is better observed in infants than adults. In two eyes which were very carefully examined by this observer, 180 rays were counted, but he has not been able to determine whether each segment has its own particular membrane, or a single membrane is common to two. Viewed with a microscope, the walls of the slices appear as simple transparent membranes, without any peculiar structure, but covered with innumerable small nuclei, which the author believes to be the result of precipitation. The axis, towards which all the slices converge, is the axis of the optic nerve. Having hardened a human eye in chromic acid, he made both horizontal and perpendicular sections of it. A horizontal section through the centre of the vitreous body presented a uniform plain surface, such as would result from the section of an orange cut right through the centre from pole to pole; whereas a perpendicular section of the vitreous body corresponded with what would result from a section of an orange made at right angles with that last described, viz., a number of rays converging towards the centre, which rays correspond with the different divisions of the orange-like slices of which it is composed.—*Dub. Quart. Journ.*, May, 1848, from *Annales d'Oculistique*.

64. *Cholesterine Cataract*. By W. R. WILDE, Esq.—About six years ago, a butcher, aged forty years, consulted us for loss of vision in his right eye, the result of a blow received some years previously. Upon examination we found a hard cataract, of a remarkable yellow colour, and to all appearance of a calcareous nature. Certain portions of its external surface presented the brilliant metallic appearance known as gold-leaf cataract. From its singularity we had an accurate drawing made of it at the time, and then lost sight of the patient for some years. Twelve months ago he again applied at the hospital, in great pain, and with the eye deeply inflamed, the result of a blow which he received upon the temple a few days previously in a drunken squabble, when, to use his own expression, his eye was burst. Upon examination we found that, to a certain degree, his opinion was correct, concussion and dislocation of the lens having taken place. The central nucleus of the lens was lying at the bottom of the anterior chamber, and a quantity of brilliant matter, like broken-up gold leaf, floated through the aqueous fluid, and adhered to the back of the cornea. When the eye had been at rest for some time, the greater portion of these particles subsided to the bottom of the chamber, but upon moving the eye, or on the patient's making any exertion, they floated upward, producing the appearance which we sometimes see in the fundus of the eye, and which, under the name of "sparkling eye," has recently engaged the attention of oculists. We had an accurate drawing made of the eye in this condition. The usual antiphlogistic treatment having failed to afford relief, and the pain being most intolerable, we agreed to extract the lens, and remove as much of the offending body as possible. As this very remarkable case afforded a rare opportunity for analyzing this peculiar form of cataract, Professor Aldridge carefully examined the case, and assisted us at the operation. We made an inferior section of the lower third of the cornea with Scott's extraction knife, which is well adapted for such cases, from the curvature on the back, and the little space which it occupies. During the incision a small eye-cup was held beneath the globe, in order to receive the lens, and other means adopted to preserve as much as possible of the substance we wished to analyze. As soon as the incision was completed, the great mass of the broken-up lens and the central nucleus immediately escaped, and the remaining fragments were removed with Daviel's scoop. Immediate relief was experienced; the wound healed by the first intention, but with rather a broad cicatrix. There was no adhesion or distortion of the pupil. The globe did not collapse, but the vision had been for many years extinct.

We give the following account of the analysis from a letter of Professor Aldridge's: "You may recollect that, previous to operation, distinct and beautiful crystals were visible, attached to the interior of the cornea, similar to scales of yellow mica. These, during the operation, you scraped off, at my request, and handed them to me, together with the extracted lens. The crystals referred to,

when examined by the microscope, appeared under the form of rhombic plates. They were soluble in ether and hot alcohol, from the latter of which they recrystallized in cooling, and were insoluble in a solution of potash, which, however, removed their colour. The lens was anteriorly sprinkled closely with similar crystals, but when these were removed, by digesting with ether, the lens itself remained white and opaque. It was insoluble in water, alcohol, ether, or dilute acid, but readily dissolved when gently heated in a solution of potash, and was again precipitable by acetic acid. I think there can be no doubt but that the crystals were chiefly composed of *cholesterine*, and that the cataract was due to the deposition of some proteine compound, and a distinct phenomenon from the crystallization of the cholesterine discovered upon its surface, and which was afterwards so manifest in the anterior chamber." Besides the general interest of this very curious case, there are two topics connected with it on which we would remark: First,—the value of having accurate drawings made of every remarkable case which occurs, even though at the moment no ultimate benefit, except that of representing a peculiar form of disease, may appear to be gained; and secondly,—the advantage which ophthalmic surgery must derive from the analysis of morbid products such as that described.—*Dub. Quart. Journ.*, May, 1848.

65. *Sparkling Eye*. By W. R. WILDE, Esq.—In synchysis and certain forms of ophthalmic disease we sometimes observe, upon looking steadily into the depth of the eye, that there is a peculiar scintillating appearance exhibited. At times this has the appearance of small sparks of light, not unlike the phosphorescence which sometimes appears upon the surface of the sea, particularly when the water is agitated. Those brilliant sparks generally appear to rise up from the inferior surface of the eye, and fall down again in a description of shower. In two cases which we have had under our care, this appearance could be induced by any motion or exertion, when it very much resembled the look which a bottle of *eau de sie* presents when the gold leaf in it is shaken up. There are other appearances in the eye of a luminous character, with which this must not be confounded. In certain forms of amaurosis we can, particularly when the pupil is dilated, perceive a brilliant yellow appearance, with a metallic lustre, and of a spherical shape, lining the fundus of the eye. At first view this might be taken for the early stage of malignant disease, but the history of the case, the age of the patient, and the attendant circumstances, will enable us to distinguish it from that affection, although at times the differential diagnosis is exceedingly difficult. The scintillations to which we have alluded may or may not be attendant upon this form of disease. The cause of these appearances has lately engaged the attention of several continental writers. M. Desmarres thinks that it is due to a peculiar morbid disposition of the hyaloid cells, which, being less distended than natural, on account of the fluidity of the vitreous humour, and floating one over the other, reflect separately, instead of refracting the light. M. Malgaigne considers that this phenomenon is owing to the presence of little foreign bodies floating in the vitreous humour, and put in motion during the movements of the eye. These he believes to be crystals of cholesterine, which reflect the light as they present themselves to it in several inclinations. M. Taignot's opinion coincides with the latter. He says that he has collected some of these sparkling particles, and that they bore the greatest possible analogy to the corpuscles of cholesteria sometimes found in the liquid of hydrocele. He does not know, he says, whether their chemical composition be the same, but he considers it probable; and he thinks that the crystalline capsule, from its serous character, at least upon one aspect, may give rise to a product similar to that produced by the tunica vaginalis.* We incline to the opinion, that in a great many cases the sparkling appearances are caused by the chemical substance just alluded to; and we are the more induced to believe this from the examination of the gold-leaf cholesterine cataract already detailed; [see previous article;] but there are other cases where the brilliant appearances do not present a palpable character like those just described, but appear as brilliant, evanescent scintillations of light, even in the anterior chamber.—*Ibid*.

* *Revue Medico Chirurgicale*, August, 1847.